

**US-PAT-NO: 6542747**

**DOCUMENT-IDENTIFIER: US 6542747 B1**

**TITLE: Radio communication system**

**----- KWIC -----**

**Brief Summary Text - BSTX (8):**

**As a concrete example of the dynamic channel assignment method, Japanese Patent Application Laid-open No. H6-53901 discloses a technique titled "Idle Channel Detection Method for Mobile Communication" in which interference wave levels of all of communication channels assigned to a system are measured in an arbitrary sequence and communication channels whose interference wave levels are lower than a certain constant level are determined as idle channels, which are in idle state and can be utilized.**

**Brief Summary Text - BSTX (9):**

**In the disclosed conventional idle channel detection method for mobile**

**communication system, which is constructed with a service area composed of a plurality of cells, base stations provided in the respective cells, a plurality of mobile units and a plurality of communication channels assigned to the system for performing communication between the mobile units and the base stations, the mobile unit or the base station measures interference wave levels in all of communication channels assigned to the system in an arbitrary sequence and communication channels whose interference wave levels are lower than a certain constant level are determined as idle channels. The communication is performed between the mobile units and the base stations by utilizing the idle channels.**

**Brief Summary Text - BSTX (10):**

**In the conventional method, a plurality of different idle channel search sequence tables of the communication channels having interference wave levels to be measured are prepared and each of the idle channel search sequence table is assigned to base stations separated from each other by a constant distance. The base station or the mobile unit measures the**

interference wave levels of the communication channels in sequence according to the assigned idle channel search sequence table. In a case where the mobile unit measures the interference wave levels, the base station notifies the mobile unit of the assigned sequence table such that the base station or the mobile unit can use an idle channel, which is initially detected by the mobile unit according to the idle channel search sequence table supplied from the base station, for the communication therebetween.

**Brief Summary Text - BSTX (17):**

However, there are the following problems in the described prior art. That is, since, in order to detect an idle channel in the mobile unit, interference wave levels must be measured (detected) from the initial channel according to the idle channel search sequence table until an idle channel is detected, it takes a long time to detect an idle channel when the amount of traffic is large.